

# A systematic study on the genus *Nuntiella* Kuznetsov (Lepidoptera: Tortricidae: Olethreutinae)

ZHANG Ai-Huan, LI Hou-Hun

(Department of Biology, Nankai University, Tianjin 300071, China)

**Abstract:** Descriptions of three species of the genus *Nuntiella* Kuznetsov are given in this paper. Two species (*Nuntiella laticuculla* sp. nov. and *Nuntiella angustiptera* sp. nov.) are described as new to science and the female of *Nuntiella* is reported for the first time. The photographs of the adults and the genital structures are provided. A key to the described species is given.

**Key words:** Lepidoptera; Tortricidae; Olethreutinae; *Nuntiella*; systematics; new species; China

The genus *Nuntiella* was erected by Kuznetsov (1971) for *Nuntiella extenuata* Kuznetsov based on the male specimens collected from Taibaishan (Tapaishan), Mts. Qinling (Tsingling), Shaanxi Province, China. It is the only species of the genus recorded to date and distributed only in China. During our study we found both sexes of *N. extenuata* Kuznetsov near its type locality. The present paper reports three species of *Nuntiella*, two of which are described as new to science. The female is reported for the first time to the genus.

The type specimens are deposited in the Department of Biology, Nankai University, Tianjin, China.

## *Nuntiella* Kuznetsov

*Nuntiella* Kuznetsov, 1971. *Entomol. Obozr.*, 50(2): 433.

Type species: *Nuntiella extenuata* Kuznetsov, 1971.

Descriptions of venation and male genitalia were seen in Razowski's paper (1989). The female genitalia is described in *N. extenuata* Kuznetsov below.

Early stages and biology unknown.

Distribution China.

Notes: *Nuntiella* is similar to *Epiblema* Hübner, but can be distinguished by the bifurcate uncus. It is also similar to *Rhopobota* Lederer in having a large bifurcate sclerite situated at distal part of corpus bursae, but can be separated by the male genitalia. In addition, *Nuntiella* is distributed only in China, but *Epiblema* and *Rhopobota* are distributed worldwide except African region.

## Key to the species of *Nuntiella* Kuznetsov based on the male genitalia

1. Valva with lobe far from horn; cucullus broad and short .....  
..... *N. laticuculla* sp. nov.  
Valva with lobe close to horn; cucullus thinner ..... 2
2. Valva with neck about half width of its base; two arms of bifurcated uncus thin; cucullus narrowed toward dorsal part ...  
..... *N. extenuata* Kuznetsov  
Valva with neck about 2/3 width of its base; two arms of bifurcated uncus broad, triangular; cucullus not narrowed toward dorsal part ..... *N. angustiptera* sp. nov.

## 1 *Nuntiella laticuculla* Zhang et Li, sp. nov. (Figs. 1, 4a, 4b)

Adult (Fig. 1): Wing expanse 14.0 mm. Head with vertex grey mixed with brown, face brown. Antenna grey. Labial palpus brown, terminal segment and end of second segment grey. Thorax and tegula greyish brown. Fore wing broad, with ground color silvery white, apex with a round brown spot; costa brown, with seven pairs of grey strigulae from apex to basal 1/3; basal patch brown, with break in the middle, produced into a big triangular patch between 1/3 and 1/2 of dorsum; ocellar patch elliptic, greyish brown; dorsum with an irregular light brown patch before ocellar patch; cilia grey, with scattered brown scales. Hind wing and cilia grey. Foreleg and midleg brown; hindleg grey.

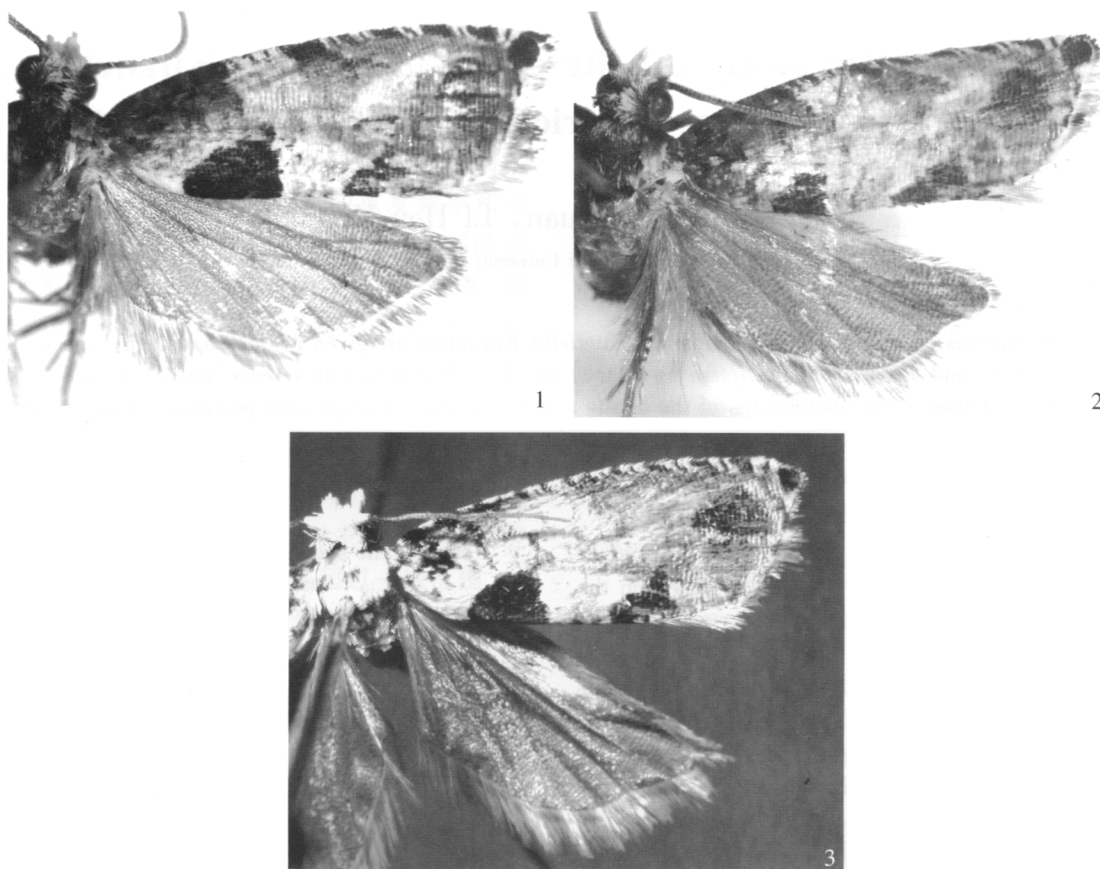
Male genitalia (Figs. 4a, 4b): Uncus minute, bifurcated, two arms triangular; socius rudimentary, with a few hairs. Valva broad at base, neck about half width of base; sacculus with lobe far from horn on ventral edge of basal opening; cucullus short, broad oblong, hairy, with a few marginal spines, and ventral corner of cucullus greatly protrudent. Aedeagus short;

基金项目: 国家自然科学基金特殊学科点项目(No.108)

作者简介: 张爱环, 女, 山西人, 博士研究生, 从事昆虫系统学研究, E-mail: zhangaihuan@atfriday.com

\* 通讯作者 Author for correspondence, E-mail: lihounun@nankai.edu.cn

收稿日期 Received: 2004-03-24; 接受日期 Accepted: 2004-06-03



Figs. 1–3 Adults of *Nuntiella* spp.

1. *Nuntiella laticuculla* Zhang et Li, sp. nov., ♂; 2. *Nuntiella angustiptera* Zhang et Li, sp. nov., ♂; 3. *Nuntiella extenuata* Kuznetsov, ♀.

cornuti numerous (deciduous and lost).

Female: Unknown.

Holotype ♂, China: Mt. Fanjing (27.55° N, 108.41° E), Guizhou Province, 1 700 m, 1. VI. 2002, leg. WANG Xin-Pu, genital slide no. ZAH03858. Paratype: 1 ♂, same data as holotype.

Diagnosis: This species is similar to *N. extenuata* Kuznetsov, but differs by uncus smaller, sacculus with lobe farther from the horn than that in the latter species, cucullus broad oblong. While in *N. extenuata* uncus is longer, sacculus has lobe close to horn, and cucullus is narrowed toward dorsal part.

Etymology: The specific name comes from the Latin *lati-* (broad) and *cucullus*, in reference to cucullus broad in the male genitalia.

## 2 *Nuntiella angustiptera* Zhang et Li, sp. nov. (Figs. 2, 5a, 5b)

Adult (Fig. 2): Wing expanse 13.0 mm. Vertex grey mixed with brown, face brown. Antenna light brown. Labial palpus brown, terminal segment and end of second segment grey. Thorax and tegula brown mixed with grey. Fore wing somewhat elongate, with ground color silvery white, apex with a round brown spot; costa

with seven pairs of grey strigulae from apex to basal 1/3; basal patch brown, with break in the middle, produced into a small triangular patch between 2/5 and 1/2 of dorsum; dorsum with an elongate triangular brown patch before tornus; ocellar patch elliptic, light brown; cilia grey except for brown at apex and in the middle. Hind wing and cilia grey. Legs greyish brown.

Male genitalia (Figs. 5a, 5b): Uncus broad, bifurcated, two arms more or less triangular, with a few hairs; socius rudimentary, with several hairs. Valva broad at base, neck about 2/3 width of base; sacculus with lobe close to horn on ventral edge of basal opening; cucullus oblong, hairy, with a few marginal spines. Aedeagus broad and short; cornuti numerous, spiculate.

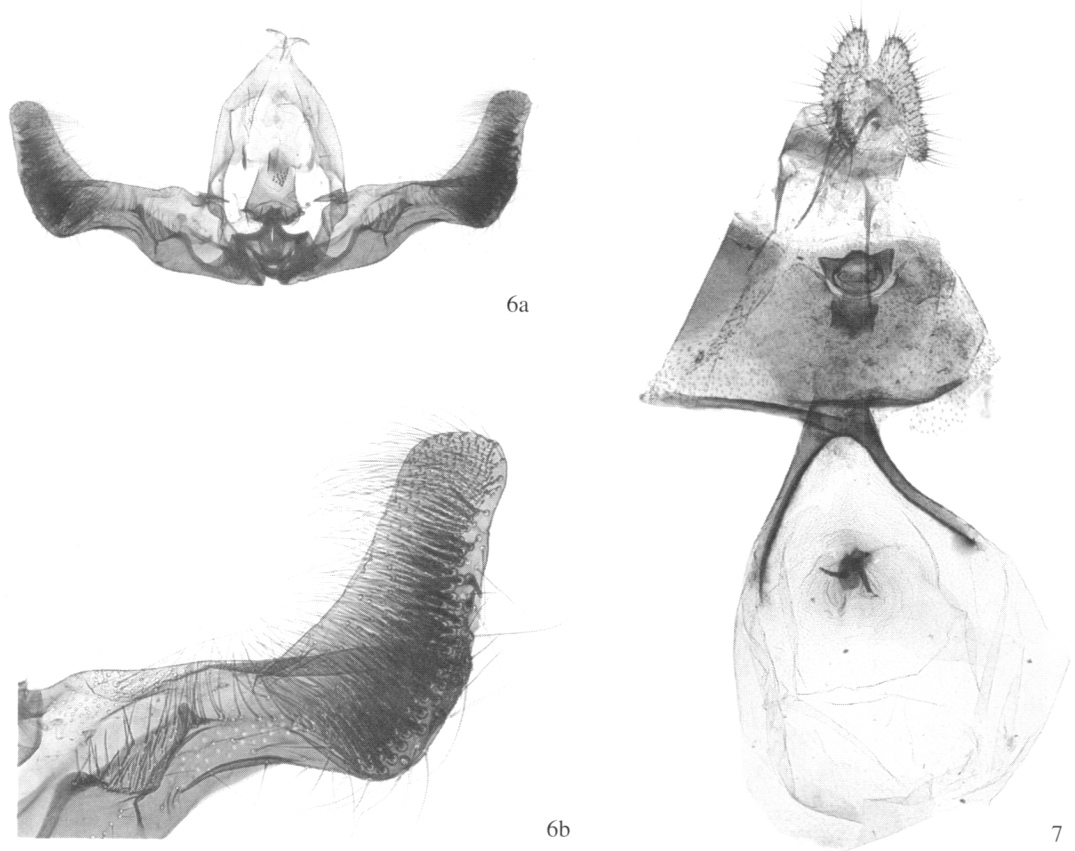
Female: Unknown.

Holotype ♂, China: Mt. Mao'er (25.53° N, 110.25° E), Guangxi Province, 1 100 m, 10. IV. 2002, leg. HAO Shu-Lian and XUE Huai-Jun, genital slide no. ZAH03859.

Diagnosis: This species is allied to *N. extenuata* Kuznetsov, but differs by two arms of uncus broadly triangular and cucullus oblong. In *N. extenuata* two arms of uncus is thin, and cucullus is broader ventrally



Figs. 4 – 5    Male genitalia of *Nuntiella* spp.  
4a. *Nuntiella laticuculla* Zhang *et* Li, sp. nov. ; 4b. *ditto*, enlarged right valva;  
5a. *Nuntiella angustiptera* Zhang *et* Li, sp. nov. ; 5b. *ditto*, enlarged right valva.



Figs. 6 – 7    *Nuntiella extenuata* Kuznetsov  
6a. Male genitalia; 6b. Enlarged right valva; 7. Female genitalia.

than dorsally.

**Etymology:** The specific name is derived from the Latin *angusti-* (narrow) and *-ptera* (wing), referring to the shape of the fore wing.

**Remarks:** The two new species described above are similar superficially, but can be separated from each other by the following characters: In *Nuntiella angustiptera* sp. nov., forewing narrow and long, two arms of uncus broadly triangular, cucullus longer than twice of its width and sacculus with lobe close to horn. While in *N. laticuculla* sp. nov., forewing broader, two arms of uncus minute, cucullus about twice as long as its width and sacculus with lobe far from horn.

### 3 *Nuntiella extenuata* Kuznetsov, 1971 (Figs. 3, 6a, 6b, 7)

*Nuntiella extenuata* Kuznetsov, 1971. *Entomol. Obozr.*, 50 (2): 433; *id.*, 2001. In: Ler (ed.), Key to the Insects of Russian Far East, 5(3): 450. Razowski, 1999. *SHILAP Revta. lepid.*, 27(108): 478.

**Adult** (Fig. 3): Wing expanse 15.0 mm. Head white. Antenna with white pedicel and light brown flagella. Labial palpus brown, terminal segment and end of second segment grey. Thorax grey mixed with brown; tegula with basal 1/4 brown, posterior 3/4 grey. Fore wing somewhat broadly triangular, with ground color grey, apex brown; costa with eight pairs of strigulae from apex to costal 1/3; a brown triangular patch situated at 1/4 of dorsum; dorsum also with a small triangular brown patch before tornus; ocellar patch inverted pyriform, with anterior half light brown and posterior half fulvous; cilia grey mixed with greyish yellow. Hind wing and cilia grey. Foreleg brown, midleg light brown, hindleg grey.

**Male genitalia** (Figs. 6a, 6b): Uncus bifurcated, slender, with pointed apex; socius undeveloped, with

several hairs. Valva broad at base, neck about half width of base; sacculus with lobe close to horn on ventral edge of basal opening; cucullus narrowed toward dorsal part, hairy, with a few marginal spines. Aedeagus stout; cornuti numerous (deciduous and lost).

**Female genitalia** (Fig. 7): Papilla analis narrow and long, setose; anterior apophysis slightly shorter than posterior apophysis. Sterigma semicircular, with two posterior angle protruded. 7th sternite broadly sclerotized, sunk on posterior edge. Antrum about 1/3 length of ductus bursae. Ductus bursae broad, slightly shorter than half of corpus bursae. Large bifurcate sclerite situated at distal part of corpus bursae. Corpus bursae large, oval; two small spine-like signa present, different in size, with sclerotized basal plate.

**Specimens examined:** 3 ♂♂, 1 ♀, China: Ankang (32.41°N, 109.01°E), Shaanxi Province, 2 150 m, 27. VI. 2003, leg. YU Hai-Li.

**Distribution:** China (Shaanxi).

**Remarks:** In the specimens which we have studied, arms of bifurcated uncus are pointed at end, which is slightly different from the original drawing (Kuznetsov, 1971). The female of *Nuntiella extenuata* Kuznetsov is reported for the first time.

### References

- Kuznetsov VI, 1971. New east Asiatic species of the leaf rollers of the subfam. Olethreutinae (Lepidoptera, Tortricidae). *Entomol. Obozr.*, 50(2): 427–443.
- Kuznetsov VI, 2001. Tortricoidea. In: Ler PA ed. Key to the Insects of Russian Far East. Vol. V. Trichoptera and Lepidoptera. Pt. 3. Vladivostok Dal'nauka, 1–621.
- Razowski J, 1989. The genera of Tortricidae (Lepidoptera). Part II: Palaearctic Olethreutinae. *Acta. zool. cracov.*, 32(7): 107–328.
- Razowski J, 1999. Catalogue of the species of Tortricidae. Part V: Palaearctic Eucosmina and Enamoniina (Insecta: Lepidoptera). *SHILAP Revta. lepid.*, 27(108): 437–506.

# 连小卷蛾属系统分类研究

## (鳞翅目: 卷蛾科: 新小卷蛾亚科)

张爱环, 李后魂  
(南开大学生物系, 天津 300071)

**摘要:** 本文对连小卷蛾属 *Nuntiella* Kuznetsov 进行了系统研究, 共记述三个种研究, 其中有两个新种: 阔端连小卷蛾 *Nuntiella laticuculla* sp. nov. 和狭翅连小卷蛾 *Nuntiella angustiptera* sp. nov.。首次描述了连小卷蛾属的雌性外生殖器特征。文中提供了成虫和外生殖器特征图及分种检索表。模式标本保存在南开大学生物系。

**关键词:** 鳞翅目; 卷蛾科; 新小卷蛾亚科; 连小卷蛾属; 系统分类; 新种; 中国

**中图分类号:** Q969      **文献标识码:** A      **文章编号:** 0454-6296(2004)04-0485-05

**分种简记**

**阔连小卷蛾, 新种 *Nuntiella laticuculla* Zhang et Li, sp. nov.** (图 1, 4a, 4b)

翅展 14.0 mm。

正模♂, 贵州梵净山(27.55°N, 108.41°E)回香坪, 1 700 m, 2002. VI. 1, 王新谱采, 玻片号 ZAH03858; 副模: 1 ♂, 采集资料同正模。

新种与连小卷蛾 *N. extenuata* Kuznetsov 相似, 但爪形突较小, 抱器腹叶突离角状突远, 抱器端略呈宽矩形。连小卷蛾爪形突长, 抱器腹叶突离角状突近, 抱器端细, 向背面渐窄。

**狭翅连小卷蛾, 新种 *Nuntiella angustiptera* Zhang et Li, sp. nov.** (图 2, 5a, 5b)

翅展 13.0 mm。

正模♂, 广西猫儿山(25.53°N, 110.25°E)九牛塘, 1 100 m, 2002. VI. 10, 郝淑莲, 薛怀君采, 玻片号 ZAH03859。

新种与连小卷蛾 *N. extenuata* Kuznetsov 相似, 但爪形突两臂阔三角形, 抱器端近长方形。连小卷蛾爪形突两臂细, 抱器端腹面比背面宽。

本种也与阔连小卷蛾相似, 区别是前翅狭长, 爪形突两臂阔三角形, 抱器端长超过宽的两倍, 抱器腹叶突离角状突近。而阔连小卷蛾前翅阔, 爪形突两臂小, 抱器端长约为宽的两倍, 抱器腹叶突离角状突远。

**连小卷蛾 *Nuntiella extenuata* Kuznetsov, 1971** (图 3, 6a, 6b, 7)

翅展 15.0 mm。

研究标本: 3 ♂♂, 1 ♀, 陕西安康化龙山正河垭, 2 150 m, 2003. VI. 27, 于海丽采。

分布: 中国(陕西)。

(责任编辑: 袁德成)